



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/031,980	05/20/2002	Paul A. J. Morris	65008-034	1133

7590 09/16/2004

Harold W Milton Jr
Howard and Howard Attorneys
The Pinehurst Office Center Suite 101
39400 Woodward Avenue
Bloomfield Hills, MI 48304

EXAMINER

FISCHER, JUSTIN R

ART UNIT	PAPER NUMBER
----------	--------------

1733

DATE MAILED: 09/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/031,980	Applicant(s) MORRIS, PAUL A. J.	
	Examiner Justin R Fischer	Art Unit 1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-10,13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-10,13 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 2, 3, 11, and 12 are cancelled per the amendment submitted on June 21, 2004.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 4, 6-8, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Kobari (JP 61-49838, of record). Kobari is applied in the same manner as set forth in the Non-Final Rejection mailed on April 19, 2004. Kobari is directed to a method of forming a composite fabric or stretchable fabric combination useable in the clothing industry, wherein a woven fabric (cotton) is adhesively laminated via heat and pressure to a nonwoven fabric of synthetic fiber (e.g. polyester). In this instance, the nonwoven fabric of synthetic fiber is analogous to the synthetic interlining fabric of the claimed invention. Also, as the respective fabric layers are laminated, the fibers in each of said fabric layers shrink or are forced closer together such that a semi-permanent stretch is imparted to said fabrics (Page 226). This information was obtained from a USPTO translator.

Regarding claims 4 and 6, as depicted in Figure 1, the adhesive is applied to the woven fabric as a coating or liquid.

As to claims 7 and 8, as noted above, Kobari suggests the woven fabric be formed of cotton and the interlining fabric or nonwoven fabric be formed of a synthetic material, such as polyester. The nonwoven fabric of Kobari is seen to constitute the "rigid fusible non-woven" of the claimed invention (claim 8) and the woven cotton fabric, in analogous manner to the claimed invention, is seen to constitute the waistband fabric.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobari and further in view of Borge (US 3,616,150, of record). Kobari and Borge are applied in the same manner as set forth in the Non-Final Rejection mailed on April 19, 2004. As noted above, Kobari discloses a method of laminating a woven fabric to a nonwoven fabric comprising applying adhesive to a first surface of said woven fabric and hot pressing the respective layers. While Kobari fails to describe the specific adhesive used, one of ordinary skill in the art at the time of the invention would have found it obvious to use a polyurethane because it represents an extremely well known adhesive material that is extensively used when bonding fabric layers in the manufacture of clothing and additional garments, as shown for example by Borge (Column 2, Lines 50-60 and Column 3, Lines 15-25). It is emphasized that Borge is similarly directed to the manufacture of a laminated article for use in clothing and garments and furthermore, the

Art Unit: 1733

woven fabric layer of Borge is described as being cotton (Column 2, Lines 1-10). Thus, Borge recognizes the use of polyurethane adhesives in the lamination of woven fabric layers, such as cotton- one of ordinary skill in the art at the time of the invention would have been particularly motivated to use a polyurethane adhesive since it requires less energy, as compared to acrylics and additional adhesives, for complete curing.

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobari and further in view of Kavesh (US 4,819,458, of record) and optionally in view of Dagg (GB 2,307,167, of record). Kobari, Kavesh, and Dagg are applied in the same manner as set forth in the Non-Final Rejection mailed on April 19, 2004. As noted above, Kobari discloses a method of laminating a woven fabric to a nonwoven fabric comprising applying adhesive to a first surface of said woven fabric and hot pressing the respective layers. While Kobari fails to expressly suggests that the woven fabric is tensioned during processing, one of ordinary skill in the art at the time of the invention would have found it obvious to tension said woven fabric since such a technique is extremely well known in the manufacture of clothing articles in order to impart a desired pattern (against direction of shrinkage), as shown for example by Kavesh (Column 1, Lines 37-50 and Column 4, Line 58 – Column 5, Line 20). Dagg is optionally applied to further evidence the well-known use of tensioning during bonding of fabric layers in the manufacture of clothing articles (Page 8, 2nd Paragraph). Thus, tensioning is recognized in the clothing industry as a suitable processing technique when dealing with heat shrinkable fabrics, such as wool, there being no conclusive showing of unexpected results to establish a criticality for the claimed tensioning.

Art Unit: 1733

7. Claims 1, 4, 6-8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morris (WO 94/28227, of record) and further in view of Kobari and Nakazawa (US 4,141,082, of record). Morris, Kobari, and Nakazawa are applied in the same manner as applied in the Non-Final Rejection mailed on April 19, 2004. Morris teaches a method of fusing a woven or knitted fabric (woven fabric of claimed invention) to an interlining, which can be a woven, woven biased, knitted, or nonwoven fabric (Page 2, 1st Paragraph and Page 3, 4th Paragraph). In this instance, the following two-step process is used: (a) applying heat and pressure to the woven fabric and (b) fusing the thus treated woven fabric to said interlining, wherein step (a) imparts a degree of stretch to said woven fabric. One of ordinary skill in the art at the time of the invention would have found it obvious to practice the method of Morris using a single step since it is recognized in the clothing industry that a single step can be utilized to impart a desired degree of stretch (results from shrinkage of fibers) and accomplish bonding between a woven fabric and an interlining. Kobari provides one example of a similar process involving the manufacture of a composite fabric for the clothing industry wherein bonding and stretch are simultaneously achieved via a single, hot processing step in an analogous manner to the claimed invention. One of ordinary skill in the art at the time of the invention would have been motivated to use a single step process since it facilitates the processing of the respective fabrics (eliminates multi-step process) while providing suitable adhesion between said fabrics. Lastly, in describing the interlining, Morris suggests a woven, woven-biased, knitted, or woven fabric- the reference is completely silent with respect to the specific materials used to form said interlining. One

Art Unit: 1733

of ordinary skill in the art at the time of the invention would have found it obvious to use either polyester or polyamide since they represent extremely well known and extensively used interlining materials in the manufacture of clothing articles, as shown for example by Nakazawa (Column 5, Lines 28-30).

Regarding claim 2, the woven fabric of Morris can be wool or cotton (Page 2, 1st Paragraph).

As to claims 4 and 6, while the method of Morris does not include an adhesive layer, one of ordinary skill in the art at the time of the invention would have found it obvious to use an adhesive to bond the respective fabrics in order to enhance the bond strength between said fabrics. Kobari provides one example of a similar composite manufacturing process in which an adhesive layer is disposed between a woven fabric and an interlining, it being further noted that adhesive layers are commonly used when bonding such layers together in the clothing industry.

With respect to claim 8, the interlining is described as being either a woven, woven biased, knitted, or nonwoven material (Page 3, 4th Paragraph).

9. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morris, Kobari, and Nakazawa as applied in claim 4 above and further in view of Borge. Morris, Kobari, Nakazawa, and Borge are applied in the same manner as set forth in the Non-Final Rejection mailed on April 19, 2004. As noted above, Morris in view of Kobari and Nakazawa suggest a single-step process of laminating a woven fabric to an interlining fabric comprising applying adhesive to a first surface of said woven fabric and hot pressing the respective layers. While Morris, Kobari, and Nakazawa fail to describe the

Art Unit: 1733

specific adhesive used, one of ordinary skill in the art at the time of the invention would have found it obvious to use a polyurethane because it represents an extremely well known adhesive material that is extensively used when bonding fabric layers in the manufacture of clothing and additional garments, as shown for example by Borge (Column 2, Lines 50-60 and Column 3, Lines 15-25). It is emphasized that Borge is similarly directed to the manufacture of a laminated article for use in clothing and garments. Thus, Borge recognizes the use of polyurethane adhesives in the lamination of woven fabric layers, such as cotton- one of ordinary skill in the art at the time of the invention would have been particularly motivated to use a polyurethane adhesive since it requires less energy, as compared to acrylics and additional adhesives, for complete curing.

10. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morris, Kobari, and Nakazawa as applied in claim 8 above and further in view of Kavesh and optionally in view of Dagg. Morris, Kobari, Nakazawa, Kavesh, and Dagg are applied in the same manner as set forth in the Non-Final Rejection mailed on April 19, 2004. As noted above, Morris in view of Kavesh disclose a method of laminating a woven fabric to a nonwoven fabric comprising applying adhesive to a first surface of said woven fabric and laminating the respective layers via heat and pressure. While Morris fails to expressly suggest that the woven fabric is tensioned during processing, one of ordinary skill in the art at the time of the invention would have found it obvious to tension said woven fabric since such a technique is extremely well known in the manufacture of clothing articles in order to impart a desired pattern (against direction of shrinkage), as

Art Unit: 1733

shown for example by Kavesh (Column 1, Lines 37-50 and Column 4, Line 58 – Column 5, Line 20). Dagg is optionally applied to further evidence the well know use of tensioning during bonding of fabric layers in the manufacture of clothing articles (Page 8, 2nd Paragraph). Thus, tensioning is recognized in the clothing industry as a suitable processing technique when dealing with heat shrinkable fabrics, such as wool, there being no conclusive showing of unexpected results to establish a criticality for the claimed tensioning.

Response to Arguments

11. Applicant's arguments filed June 21, 2004 have been fully considered but they are not persuasive. Regarding Kobari, applicant contends that the nonwoven of Kobari is not fusible and furthermore, that the stretch of the claimed invention is obtained by compression shrinking as opposed to thermal shrinking alone. As set forth in the rejection above and in an analogous manner to the claimed invention, Kobari teaches a laminated assembly comprising a base fabric (woven cotton fabric) and a top fabric (nonwoven fabric of synthetic fiber, such as polyester). The laminated assembly of Kobari is formed by arranging adhesive between the respective fabrics and applying heat and pressure. Kobari additionally teaches that the laminated assembly contains an uneven spotted pattern due to the difference in shrinkage of the respective fabrics. Thus, the laminating conditions (includes pressure) are such that they affect bonding between the fabrics and a desired degree of shrinkage within the respective fabrics- this is analogous to the simultaneous bonding and shrinkage detailed by the claimed invention. It is unclear how the nonwoven fabric of Kobari, which can be polyester,

does not constitute a fusible nonwoven since it is bonded to the woven fabric via heat and pressure in an analogous manner to the claimed invention (it is noted that the nonwoven fabric is not claimed as a fusible nonwoven). It is emphasized that the method of Kobari uses the same materials (woven cotton fabric and polyester fabric) as the claimed invention and furthermore, provides similar laminating conditions (heat and pressure) to affect a desired degree of shrinkage (and thus a semi-permanent stretch) in an analogous manner to the claimed invention.

Regarding Morris, applicant has not presented any arguments.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 1733

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R Fischer** whose telephone number is **(571) 272-1215**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Justin Fischer

September 14, 2004



BLAINE COPENHEAVER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700